SYLLABUS FOR PHY 252: Physics III
Spring 2005
INSTRUCTOR: Dr. Gary B. Adams
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CLASSES: OFFICE HOURS:
PHY 252 12:15-1:30 TTH 3:40-5:00 MWF PSF-462
PHY 252 1:40-3:30 MWF 1:40-2:30 TH PSF-462
PHY 334 1:40-4:30 T 2:40-3:30 TH PSH-352

(This schedule is tentative. See my web page for updates.)

I. INTRODUCTION

PHY 252 is the third in the sequence of introductory physics courses offered to physics majors at ASU. Prerequisites for PHY 252 are MAT 272 and PHY 150/151. A corequisite is PHY 201.

PHY 252 covers the subjects of waves (mechanical waves including sound and electromagnetic waves including visible light), physical optics, kinetic theory, and thermodynamics. A detailed list of topics can be found on the lecture schedule which accompanies this syllabus.

The textbook is Physics for Scientists and Engineers, by Wolfson and Pasachoff, Third Edition, (Addison Wesley, 1999.) Reading assignments are keyed to this textbook. At the bookstore, you want to buy the textbook which does NOT come packaged with Mastering Physics (MP). For this year only, MP will be provided free of charge to 252 students. See the Mastering Physics page on our course web site for information. PRS (Personal Response System) transmitters will also be provided by the Dept. of Physics.

II. COURSE FORMAT AND POLICIES

A. General

The course during this Semester commences on Wed., Jan. 10 and concludes on Mon., May 2. A schedule of lectures, examinations, and reading assignments is distributed with this syllabus. A schedule of homework assignments will be posted on the class web site.

Lectures are on MWF from 1:40 until 3:30 in PSH 356. The Lab section of the class will usually begin at 2:40; exceptions can be found in the lecture
or lab schedules on the course web site. Students are responsible for any information imparted to the class during lectures. Minimal preparation for lecture is to do the reading assignment for that day, which is distributed with this syllabus. To more fully prepare for lecture, also take an advance look at the homework problems which will be assigned for that lecture. A small number of Multiple Choice questions will be asked during each lecture. These may cover the reading assignment, or may check your comprehension of some topic just covered in lecture. You are expected to record your response to these questions using your PRS (Personal Response System) transmitter. You must register your transmitter in order for your responses to be graded. A guide to PRS, including instructions for registering your transmitter, can be found at the course web site. You must use only the transmitter that you register.

Your ASU e-mail address will be used to disseminate information. Students are responsible for receiving it. Make sure that your ASU email address is functional and that your spam filter, if operating, allows emails from your instructor and TA.

B. PRS (Personal Response System)

You will use your PRS transmitter to answer Multiple Choice questions during the lecture period. Your answers will be graded, and your PRS grade will count 3% of your overall class grade. You are always encouraged to discuss PRS questions with your neighbors in lecture, but when answering, always think for yourself. A correct answer will be counted as 3 points, an incorrect answer will be counted as 2 points, and no answer will be counted as zero points; so the penalty for an incorrect answer is very small.

C. Homework

A list of assigned homework problems will be made available on the class web site as the semester proceeds. There will be one assignment for each lecture. Almost all homework assignments are to be completed and turned in using Mastering Physics (MP); however, there may be ten to twenty problems during the semester which have to be written up and handed in at lecture. A guide to using MP can be found on the course web site. Due dates for Mastering Physics HW are available on the MP Assignment List. In general, you should endeavor to complete MP assignments before the next lecture; however, due dates are usually liberally set at about one week after the lecture for which
the problems are assigned. The official due dates are always the ones found at your MP site. Assignments submitted after the due hour has passed will receive a rapidly declining amount of partial credit which will go to ten percent one hour after the due hour. Due dates for problems that must be written up and turned in will be found at the HOMEWORK SCHEDULE page on the course web site. A MINIMUM OF 600 HOMEWORK POINTS IS REQUIRED FOR A PASSING GRADE IN THE COURSE.

The following policies govern written homework:
* Written assignments will be accepted only at the beginning of the lecture period on the days they are due. LATE HOMEWORK WILL NOT BE ACCEPTED.
* STUDY GROUPS ARE STRONGLY ENCOURAGED. However, written homework solutions should be one’s own. Homework that has obviously been copied will not receive credit and the students involved will be subject to charges of academic dishonesty.

D. Examinations
The five tests will cover material indicated in the schedule by lecture numbers. Each test will consist of 2-3 problems and 10-15 multiple choice questions. The problems may be similar to homework, but they may also represent applications of principles in entirely different circumstances. The multiple choice questions may cover conceptual questions as well as "quicky" problems. The final examination will consist of 40 multiple choice questions. The final will be comprehensive. For the test dates, see the lecture schedule.

Examinations are governed by the following policies:
* THERE WILL BE NO MAKE-UP TESTS. The lowest score of all five tests will be deleted in the final course grade calculation.
* Academic dishonesty on an examination will result automatically in a failing grade for the course and referral to the Dean for further sanctions. Cheating in any form will not be tolerated!
* The use of hand calculators is permitted. However, YOUR CALCULATOR MAY NOT CONTAIN STORED PHYSICS EQUATIONS.
* Test paper (including scratch paper) will be provided. Bring only your pencils and calculators.
* Formula sheets will not be used in tests. Understanding a concept of physics is tantamount to knowing its mathematical expression and how to apply it to a given physical situation. Non-trivial derivatives and integrals, numerical values of physical constants, and some case-specific
formulas will be provided when their use is required.

* Partial credit is given. Arithmetical errors will be treated charitably, but for answers that do not make physical sense (wrong dimensions, deviation by several orders of magnitude, etc.) no credit will be awarded.

* In the event of a fire alarm occurring during an examination, students will be asked to close their examination booklets, gather their belongings and leave the room as expeditiously as possible, leaving their examination booklets on the tables where they were working. The booklets will be gathered and graded as they are. Unless the alarm proves to represent a bona fide emergency, there will be no make-up examination.

* If a student believes there to have been an error in grading his or her examination, the complaint should be PUT IN WRITING and handed, together with the examination, to the course instructor. The problem will be regraded by the individual who graded it originally. If the student is not satisfied with the grader’s response to the complaint, he or she may appeal to the course instructor. In this event, the instructor reserves the prerogative to regrade the entire examination.

F. Final Grades.

The final course grades will be determined with the following weights:

- PRS: 3%
- Homework: 12%
- Labs: 20%
- Tests (best 4 of 5): 50%
- Final Examination: 15%

A MINIMUM OF 600 HOMEWORK POINTS IS REQUIRED FOR A PASSING GRADE IN THE COURSE.

The scale for final letter grades will ultimately be determined by the overall class performance. However, any student who earns 90% of all possible points can expect to receive an A. For information on HOW TO FIGURE YOUR FINAL GRADE see the course web page.

G. Withdrawal

Withdrawal policies are established by the University (see the Spring 2005 Semester Bulletin.) The deadline for course withdrawal is Apr. 1.

Beginning Jan. 20, this information, plus course info updates, will be available on the internet at http://www.public.asu.edu/~gbadams